

II. *On the Entomology of China, with Descriptions of the new Species sent to England by Dr. Cantor from Chusan and Canton.* By the Rev. F. W. HOPE, F.R.S. &c.

[Read 7 March, 1842.]

VERY little is known of the Entomology of China. Our countryman Donovan, in the year 1798, published a quarto volume containing descriptions of twenty-five *Coleoptera*, besides various insects of other Orders. It is, I believe, the only work exclusively devoted to Chinese insects. The descriptions of the species, according to the taste of that day, are decidedly too laconic, so much so that without the accompanying plates it would be difficult in several instances to recognize the insects intended. The plates, however, are well worthy of Donovan, and exhibit a richness of colouring which has rarely, if ever, been surpassed. In the continental works of Entomologists some Chinese insects occasionally will be found described, but the number is but small. I believe that in the catalogue of the Baron De Jean scarcely 100 species are noticed as occurring there; now, allowing another century of species to be included in the writings of other authors, we shall then have the paltry amount of 200 *Coleoptera*, which are all that can be mentioned as inhabiting one of the most considerable of eastern empires. It should here be mentioned that a large proportion of East Indian insects are common to China, and therefore the number of known species might be greatly increased. That the Chinese Fauna will eventually prove to be rich cannot be doubted. As to the number of species and abundance of individuals no paucity will ever be discovered. It may then fairly be deduced from the foregoing remarks, that we know scarcely anything of China entomologically. The acquisition therefore of fifty new *Coleoptera* is certainly an important addition to that Fauna. Sorry am I to add that the bulk of these were collected by Dr. Cantor just after a recovery from the Chusan fever, with which he was severely attacked. "They are," as he states in his letters, "chiefly from two localities, Chusan and Canton, and I could wish that they were more numerous and valuable. No one can form an idea what I suffered in collecting them, and, when collected, the difficulty of keeping them from mould and accident was no trifling matter. Pray let them be described, if it is only to convince others that zeal for science and assiduity on my part have not been wanting." In accordance with Dr. Cantor's wish I have described fifty new *Coleoptera*. Dr. Horsfield has kindly under-

taken the *Lepidoptera*, and it is hoped that the remaining Orders, containing but few species, will not be neglected by those members of this Society who are capable of describing them. In concluding these brief remarks I have only to add, that since a renewal of our acquaintance with Chinese forms has commenced, it will be well not to neglect them; there are several naturalists able and willing to collect for us, and it is but just that their exertions and labours should be recorded in describing for them what they have amassed.

To what more valuable Entomological region can we look than China: let us speak of the unknown regions between the Bay of Bengal on one side, and the Chinese sea on the other, and, next, the territories between Peking on the north and Singapore on the south, we shall there find a sufficiency of climate, soil, mountain, forest, jungle, lake, and land; in short, all that the most fastidious can desire. It is in those extended limits of the east that much, very much, may be expected, and I would here designate them as holding out a *Sofala* or an *Eldorado* to the Entomologist. It is reported that the discovery of silk was first made in those regions. There the manufacture of it has flourished for centuries, and still it flourishes in perfection. It is there we may obtain raw silk sufficient to glut the European markets. There also we shall find the *Cochineal* and *Lac* insects, abundance of honey and wax, and why may not galls of commerce and other insectal products be confidently expected? such indeed as may tend to the promotion of arts and sciences; in a word, few countries of the world are so immensely rich in the treasures of nature as China, and as the arts have derived much benefit from thence, let us see if science, and particularly the science of Entomology, cannot equally be benefited.

*Descriptions of the New Coleoptera sent from Chusan
by Dr. Cantor.*

LUCANUS.

Sp. 1. *Lucanus Confucius*, Hope.

♂ Niger, nitidus, mandibulis capite thoraceque fere æqualibus.
Long. lin. 28, lat. lin. 7.

Caput depressum, clypeo in medio producto, flavo-ciliato.
Thorax transverse oblongus, angulis posticis oblique trun-

catis, granulatus. Elytra nigra, nitida, fere glabra, marginibus externis elevatis. Corpus infra concolor, punctatum, prosterno inter pedes anticos hastato et acuto. Pedes femoribus anticis parum robustis. Tibiæ anteriores multidentatæ, quatuor posticis in medio unispinosis.

♀ Fœmina nigra, nitida, differt mandibulis brevibus, intus unidentatis, apicibus acutis; capite subvariolofo, thoraceque punctulato.

The female is generally brighter than the male, and resembles jet; and yet, when examined under a lens, it is more punctured than is the case with the male.

Sp. 2. *Copris Sinicus*, Hope.

Niger, exscutellatus, thorace prominentia duplici, cornu capitis erecto, intus ad basin 2-denticulato.

♂ Long. lin. 10, lat. lin. $5\frac{1}{4}$.

Clypeus rotundatus et emarginatus, cornu erecto, apice acuto, ad basin scabro et 2-denticulato. Thorax ater, nitidus, sub lente tenuissime punctatus, in medio prominentia duplici, lineaque longitudinali fortiter impressa insignitus. Elytra 8-striato-punctata, punctis striarum valde impressis. Corpus infra nigrum et nitidum, femoribus subcompressis et punctatis.

The above species is somewhat allied to *Copris Sabæus*, Fab.; it is, however, evidently distinct, and appears to be undescribed.

Sp. 3. *Copris Sinensis*, Hope.

Niger, exscutellatus, clypeo emarginato, capite tuberculo lato armato.

Long. lin. 9, lat. lin. $4\frac{1}{2}$.

Mus adhuc latet.

Thorax punctulatus, linea longitudinali punctata e medio dorsi ad suturam vergente, angulis anticis rotundatis. Elytra striato-punctata, pedibus valde compressis, sparsimque punctatis.

The above insect is apparently the female of a Chinese species, with the male of which we are unacquainted.

Sp. 4. *Outhophagus Sinicus*, Hope.

Niger, antennis luteis, clypeo integro, capite cornu tauriformi.

Long. lin. $4\frac{1}{2}$, lat. lin. $2\frac{1}{4}$.

Thorax punctulatus. Elytra striato-punctata, interstitiis disci

punctatis. Podex semicircularis, margine elevato. Corpus infra nigrum et nitidum, pedibus atro-piceis.

Fœmina differt capite inermi, thorace prominentia lata insignito, lateribus subtuberculatis, angulis anticis subacutis.

It is with a doubt that I give the latter as the other sex of *Sinicus*. The sculpture of the elytra and thorax of both male and female accord tolerably well.

XYLOTRUPIDÆ, Hope.

DIPELICUS, Hope.

Corpus oblongo-ovatum, convexum. *Caput* parvum, vertice cornu erecto brevi armatum. *Mandibulæ* subtriangulares, depressæ, inermes. *Maxillæ* intus tridentatæ, dente basali lato tridenticulato, apice lato rotundato subbifido. *Palpi* maxillares formæ ordinariæ. *Mentum* subparallelum, apice rotundato et parum angustiori. *Palpi* labiales valde securiformes. *Antennæ* 10-articulatæ, articulis 6 et 7 præcedentibus latoribus, ultimis tribus clavam formantibus. *Pedes* breves robusti, posticis 4 metatarsis dilatatis, calcariis pedum 2 posticorum latis. *Prothorax* inermis.

Sp. 5. *Dipelicus Cantori*, Hope. (Plate I. fig. 1.)

Piceus, capite antice trigono, postice cornu elevato triangulari.

Long. lin. 19, lat. lin. $8\frac{3}{4}$.

Thorax convexus, varioloso-punctatus, marginibus undique elevatis. Elytra atro-picea, lineato-punctata, sutura lata insignita. Corpus infra rubro-piceum, femoribus rufis capillis obsitis. Pectus hirsutum. Segmentis abdominis punctatis et rufo-ciliatis.

[Plate I. fig. 1, the insect of the natural size; 1 *b*, mandible; 1 *c*, maxilla; 1 *d*, mentum and labial palpi; 1 *e*, antennæ.]

The above insect is named in honour of Dr. Cantor, who has enriched the Entomological Society's Cabinet with a series of duplicates from Chusan.

Sp. 6. *Mimela Dornsi*, Hope.

Affinis *Mimelæ glabræ*, Hope, at minor.

Long. lin. 6, lat. lin. 3.

Totum corpus supra viride et glabrum, antennis atro-virescentibus, infra aurato-viride. Mesosternum abrupte truncatum. Pectus et segmenta abdominis capillis flavescensibus obsita, pedibus aureo-virescentibus tarsisque nigris.

This is the smallest species known.

Sp. 7. *Popillia Maclellandi*, Hope.

Castanea, capite punctulato, thorace glabro cupreo, elytris castaneis, podice atro, maculis duabus flavis, e pilis brevibus formatis.

Long. lin. 7, lat. lin. $3\frac{1}{4}$.

Corpus infra cupreum, flavescens capillis dense obsitum. Pedes femoribus tibiisque cupreo-æneis, tarsis antennisque piceis.

The above insect is the largest Asiatic *Popillia* that is known; it is named in honour of Dr. Maclelland.

Sp. 8. *Popillia castanoptera*, Hope.

Castanea, clypeo integro punctato, parum reflexo, viridi.

Long. lin. 5, lat. lin. $2\frac{1}{2}$.

Thorax concolor, crebrissime punctulatus, fossula utrinque impressa. Scutellum punctatum. Elytra pallide castanea, striato-punctata, striis et punctis haud fortiter insculptis. Corpus infra viride, pectore segmentisque abdominis utrinque albidis capillis obsitis. Pedes femoribus tibiisque viridibus, tarsisque piceis.

Popillia is very rich in species; more than double the number already described have fallen under my notice.

HOLOTRICHA, Kirby.

Sp. 9. *Holotricha Sinensis*, Hope.

Picea, clypeo emarginato, thorace convexo pruinoso, fossula utrinque impressa, marginibusque externis subserratis.

Long. lin. 10, lat. lin. $4\frac{1}{2}$.

Elytra rubro-picea, punctatissima. Corpus infra concolor, pectore flavis capillis obsito, abdomine valde convexo, tumido, punctato et nitido. Pedes picci, tarsis pallidioribus.

Sp. 10. *Holotricha plumbea*, Hope.

Totum corpus supra et infra pruinoso colore tectum.

Long. lin. $10\frac{3}{4}$, lat. lin. $4\frac{1}{4}$.

Caput clypeo fere integro. Thorax convexus, punctulatus, lateribus sub lente parum subserratis. Elytra plumbeo-picea, punctata, quibusdam lineis insignita. Corpus infra

concolor, abdomine valde deflexo, tumido; pedibus piceis, tarsis pallidioribus.

The species of *Holotricha* of Kirby abound in the East Indies. I possess about twenty species from the British Presidencies, and know of at least the same number in our metropolitan collections.

Sp. 11. *Serica Sinica*, Hope.

Atro-plumbea, clypeo integro, antice punctulato, postice glabro. Long. lin. 4, lat. lin. $2\frac{1}{4}$.

Thorax marginibus parum elevatis. Elytra plumbea, seu atro-pruinosa, lineolata, lineis haud distinctis. Corpus infra atro-piceum, femoribus pallidioribus et compressis, tibiis tarsisque piceis.

The metropolis of *Serica* is the East Indies; the numerous species from those parts of the world which are undescribed are considerable; more than twenty, from different localities, in my collection, are yet undescribed.

ELATERIDÆ.

AGRYPNUS, Eschscholtz.

Sp. 12. *Agrypnus orientalis*, Hope.

Affinis *A. cœnoso* Hope, at major.

Long. lin. 9, lat. lin. 3.

Fuscus, flavisque capillis aspersus. Clypeus integer, auricomus.

Thorax angulis anticis obtusis, disco in medio 2-tuberculato.

Elytra striata, flavisque minutis capillis irrorata. Corpus infra concolor, antennis aurantiis pedibusque rubro-piceis.

LUDIUS, Latreille.

Sp. 13. *Ludius crocopus*, Hope.

Fuscus, antennis concoloribus.

Long. lin. 7, lat. lin. 2.

Thorax angulis posticis valde acutis, tomentosus. Elytra striata, striis sub lente parum punctatis. Corpus infra fuscum, pedibus croceis.

Sp. 14. *Ludius lutcipes*, Hope.

Affinis *L. umbracolæ* Eschscholtz, at minor.

Long. lin. $5\frac{1}{4}$, lat. lin. $1\frac{1}{2}$.

Niger, antennis flavescens. Thorax albo-tomentosus. Elytra striato-punctata, nigricantia. Corpus infra concolor, pedibus flavo-testaceis.

Sp. 15. *Ludius 4-lineatus*, Hope.

Castaneus, thorace nigro, elytris quatuor lineis nigris insignitis.

Long. lin. $4\frac{1}{2}$, lat. lin. $1\frac{1}{4}$.

Antennæ nigræ, capite concolori. Thorax ater, capillis flavis aspersus. Elytra castanea, interne et externe linea lata nigra insignita. Corpus infra piceum, pedibus flavescentibus.

Of the three species of *Ludius* described, two only strictly belong to that genus; as it may be considered at present as a magazine genus, I do not attempt its subdivisions, to one of which the last species belongs.

LAMPYRIDÆ.

COLOPHOTIA.

Sp. 16. *Colophotia flavida*, Hope.

Affinis *C. præustæ* Eschscholtz.

Long. lin. $4\frac{1}{2}$, lat. lin. $1\frac{1}{2}$.

Flava, capite atro, oculis magnis. Thorax convexus, concolor, angulis posticis subacutis, medio disci linea fortiter impressa insignito. Elytra flavescentia, apicibus subfuscis. Corpus infra flavum, femoribus concoloribus, tibiis tarsisque nigris.

Sp. 17. *Lycus Cantori*, Hope.

Aurantius, antennis fusco-nigris.

Long. lin. $3\frac{1}{4}$, lat. lin. 1.

Thorax flavidus, cruce nigricanti insignitus. Elytra tota aurantia, substriata, marginibus elevatis. Corpus infra nigrum, femoribus antice testaceis, postice fuscis, tibiis tarsisque nigricantibus.

Sp. 18. *Nacerdes Chinensis*, Hope.

Flava, capite nigro, antennis duobus primis articulis fuscis, reliquis flavescentibus.

Long. lin. $5\frac{1}{2}$, lat. lin. $1\frac{1}{4}$.

Thorax cum elytris concolor, horum apicibus nigris. Corpus infra flavum, tibiis tarsisque nigricantibus.

Sp. 19. *Lagria nigricollis*, Hope.

Flava; antennis, capite, thoraceque nigris; elytris pallidè castaneis, villosis. Corpus infra piceum, pedibus concoloribus. Long. lin. 3, lat. lin. $1\frac{1}{4}$.

LONGICORNES.

Sp. 20. *Hamaticherus Cantori*, Hope.

Affinis *Hamatich. Paridi*, Wiedemann. Magnus, fusco-brunneus, sericeus, elytrisque corpore longioribus.

Long. lin. 26, lat. lin. $6\frac{1}{2}$.

Caput porrectum, fronte foveolata. Thorax fortiter rugosus, utrinque armatus, lineâ mediâ longitudinali valde incisâ insignitus. Elytra fusco-sericea, aureola pubescentia tecta, apicibus subtruncatis, suturaque acuminata. Corpus infra concolor.

The above insect, in magnitude, is one of the largest species known, and, like other *Hamaticheri*, it is subject to vary greatly in size; it is named in honour of Dr. Cantor, to whom the Entomological Society is much indebted for a series of insects from the locality of Chusan.

TRIRACHYS, Hope.

Genus novum *Hamatichero* affine.

Caput porrectum, fronte rugosa. Antennæ 11-articulatæ, articulo 1mo crasso, valde rugoso; 2do minimo; 3tio, 4to, et 5to spinis armatis; quinque sequentibus gradatim longioribus et inermibus, extimo longissimo ternis præcedentibus haud æquali. Thorax utrinque armatus rugisque transversis impressus. Elytra apicibus 2-spinosis, marginibus elevatis. Pedes femoribus tibiisque compressis. Tarsi articulis cordiformibus, duobus primis simplicibus, ultimo subbilobato auricomato.

Sp. 21. *Trirachys orientalis*.

Magnus, brunneus et aurato-sericeus.

Long. lin. 21, lat. lin. $6\frac{1}{4}$.

Antennæ piceæ. Thorax utrinque armatus et rugosus, dorso binis sulcis longitudinaliter impressis. Elytra late sericea, apicibus 2-spinosis. Corpus infra piceum, sericeisque capillis obsitum. Pedes femoribus tibiisque piceis, tarsisque auricomatis.

I have thought fit to constitute the above insect the type of a

new genus, as it does not accord with *Paris* of Wiedemann, and any of its congeners. The peculiarity of the above genus is having three joints of its antennæ armed, which in the other sex is wanting. The oriental *Hamaticheri* require subdivision, the characters of which may be derived chiefly from the antennæ as well as from the presence or absence of armature. In our Metropolitan Cabinets three or four other species will be found.

Sp. 22. *Monohammus alternatus*, Hope.

Affinis *M. dentatori* Fab. at minor.

Long. lin. 10, lat. lin. $1\frac{1}{4}$.

Griseo-brunneus, thorace spinoso, elytris cinereo, brunneo, glaucoque nebulosis. Corpus infra concolor.

Sp. 23. *Oplophora Horsfieldii*. (Plate I. fig. 2.)

Nigra, flavo-variegata, antennis albo-cingulatis.

Long. lin. 20, lat. lin. 8.

Thorax utrinque spinosus ater, lineis binis flavis longitudinalibus insignitus. Elytra duodecim maculis flavis notatis. Corpus infra atrum, nitidum, pectore flavido, segmentisque abdominis utrinque flavo-maculatis. Pedes nigri, tibiis in medio atro-pilosis.

Sp. 24. *Cassida piperata*, Hope.

Flava, antennis concoloribus, quatuor ultimis articulis nigricantibus.

Long. lin. $2\frac{1}{2}$, lat. lin. 13.

Thorax fere hyalinus, flavus, maculâ minutâ nigrâ in medio disci positâ. Elytra flava, disco nigro-piperato. Corpus infra nigrum, nitidum, pedibus flavescentibus.

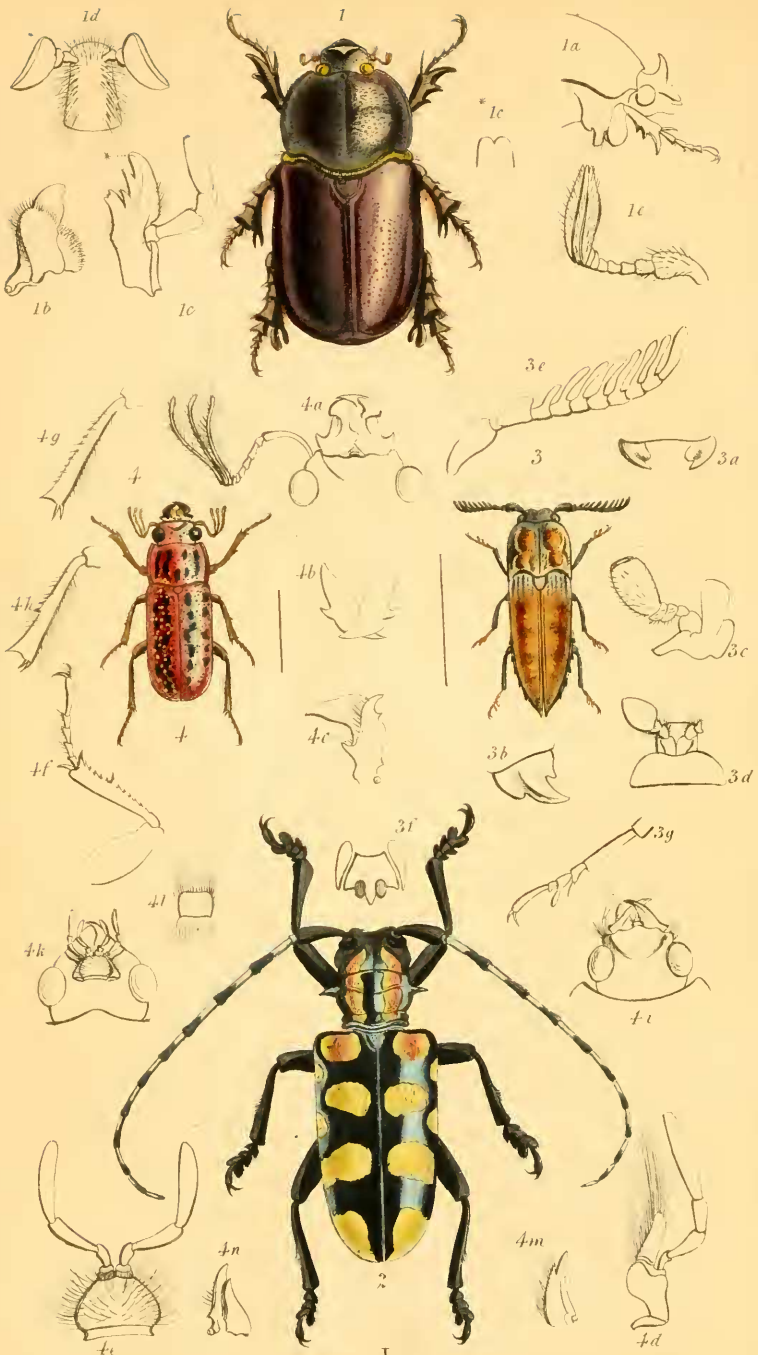
Sp. 25. *Clythra nigrifrons*.

Aurantia, capite nigro, thorace flavo immaculato.

Long. lin. 3, lat. lin. $1\frac{1}{2}$.

Elytra rubro-flava, humeris atro-maculatis, fasciâque nigro-violaceâ ante apicem positâ. Corpus infra pectore flavescenti, abdomine nigro, argenteisque capillis obsito, pedibus atris.

The above insect is subject to vary considerably; some specimens are nearly all yellow, with a small humeral spot, others again have no fascia near the apex of the elytra, and occasionally the fascia is subdivided into small black lines and irregular black spots.



Sp. 26. *Coccinella 18-spilota*.

Flava, binis maculis irregularibus nigris notata, elytris 18-spilotis, maculâ scutellari communi. Corpus flavum, pectore nigricanti, pedibusque flavescentibus.

Long. lin. $3\frac{1}{4}$, lat. lin. $2\frac{1}{4}$.

The above species is also subject to great variation; in some specimens the thorax is entirely black.

Sp. 27. *Coccinella succinea*.

Succineo-flava, thorace pallidiori, maculis quatuor in medio disci nigris.

Long. lin. 3, lat. lin. 2.

Elytra immaculata. Corpus infra flavum, pedibus concoloribus.

Sp. 28. *Coccinella tetraspilota*.

Flava, thorace antice flavo, postice nigro.

Long. lin. $2\frac{1}{4}$, lat. lin. $1\frac{1}{4}$.

Elytra pallide flava, sutura nigricanti, macula rotundata nigra ad humeros posita, secunda formâ irregulari, fere ad medium disci locata. Corpus infra flavum, pectore medioque abdominis nigro-piceis, pedibusque testaceis.

Descriptions of the New Coleoptera from Canton, sent to England by Dr. Cantor.

Sp. 1. *Melolontha Chinensis*.

Affinis *Mel. Nepalensi*, Hope. Castanea, thorace colore saturatori inquinato albisque capillis irrorata.

Long. lin. 18, lat. lin. $8\frac{1}{4}$.

Elytra testacea, lateribus externe sulcatis et atro-marginatis.

Podex fere trigonus, apice submarginato. Corpus infra piceum capillisque griseis obsitum. Mesosternum cuspidate robusto armatum.

The above insect, along with *Melolontha Indica*, *Nepalensis*, and others, form a peculiar section. At first sight the present species appears to belong to *Ancylonicha* of De Jean, and the species named by the baron is certainly much like it; the absence of a spear to the mesosternum plainly marks the species.

Sp. 2. *Anomala controversa*, Hope.

Castanea, capite piceo, margine anteriori parum elevato, antennæ testaceæ.

Long. lin. $6\frac{1}{2}$, lat. lin. 3.

Thorax flavo-castaneus, punctatus, maculis magnis binis nigris insignitis, alteraque minori utrinque in marginibus locata. Elytra striato-punctata, quibusdam lineis elevatis flavis conspicua, discus flavo piceoque colore variegatus. Podex flavescens. Corpus infra concolor, femoribus luteis, posticis binis incrassatis, tibiis tarsisque rufescentibus.

The above insect has been regarded as similar to the *Anomala Hopfneri*, which pertains to the new world, and is, I believe, not uncommon in Mexico. The present insect is an East Indian species, and, although according in colour and marking, is evidently distinct; its form at once is sufficient to distinguish it.

Sp. 3. *Galba Chrysocoma*, Hope. (Plate I. fig. 3.)

Flava, capite nigro, antennis pectinatis atris.

Long. lin. 8, lat. lin. $2\frac{1}{2}$.

Thorax antice rotundatus, angulis posticis acutis, disco 4-tuberculato, tuberculis auratis capillis tectis. Elytra aureo-tomentosa, fusca, apicibus acuminatis. Corpus infra nigrum, aureo-tomentosum, pedibusque concoloribus.

[Plate I. fig. 3, the insect magnified; 3 a, the front of the head and mandibles; 3 b, mandible; 3 c, maxilla; 3 d, mentum, &c.; 3 e, antenna; 3 f, prosternum; 3 g, tarsus.]

Sp. 4. *Harpalus Sinicus*.

Niger, capite antice rubro-piceo, postice atro nitido, antennis rufo-fuscis pilosis.

Long. lin. 7, lat. lin. 2.

Thorax lateribus rufo-marginatis, posticeque parum punctulatus. Elytra striata. Corpus infra concolor, pedibus flavescens.

Sp. 5. *Amara orientalis*.

Nigra, antennis rufis, thorace rufo-marginato, elytris striato-punctatis, pedibusque rufo-testaceis.

Long. lin. 3, lat. lin. 1.

The present insect appears to be mediate between true *Harpalus* and *Amara*.

Sp. 6. *Harpalus cyanescens*, Hope.

Niger, capite concolori, antennis duobus articulis primis testaceis, reliquis fusco-nigris.

Long. lin. $4\frac{1}{2}$, lat. lin. $1\frac{1}{4}$.

Thorax ater, margine omni flavo. Elytra striato-punctata, medio disci cyaneo, sutura flaveola, ternis lateralibus striis flavis. Corpus infra piceum, pedibus luteis.

Sp. 7. *Harpalus difficilis*, Hope.

Atro-ænea, antennis fuscis.

Long. lin. 3, lat. lin. $\frac{3}{4}$.

Thorax flavo-marginatus, elytris striatis, atro-æneis, apicibus testaceis. Corpus infra piceum, pedibus flavescensibus.

Sp. 8. *Harpalus trechoides*, Hope.

Fusco-flavus, antennis binis primis articulis testaceis, reliquis atris.

Long. lin. $2\frac{1}{2}$, lat. lin. $\frac{3}{4}$.

Thorax brunneus, margine omne flavo. Scutellum concolor.

Elytra fusco-brunnea, suturâ maginibusque externis flavescensibus. Corpus infra luteum, pedibus concoloribus.

The above three species are nearly allied to *Selenophorus*; but as it is doubtful if the genus is not described by foreign writers, I leave them at present under the name of *Harpalus*.

Sp. 9. *Coptodera 2-cincta*, Hope.

Flava, capite rufo, antennisque rubris.

Long. lin. 2, lat. lin. $\frac{1}{2}$.

Thorax niger. Elytra nigra, binis fasciis flavis insignita, una ad humeros alteraque ad apicem posita. Corpus infra testaceum, pedibus concoloribus.

Sp. 10. *Haliphus Sinensis*.

Flava, capite rufo, thorace luteo, binisque maculis punctis insignito.

Long. lin. $1\frac{3}{4}$, lat. lin. 1.

Elytra pallide flava, striato-punctata, punctis nigris, maculisque quatuor majoribus in medio disci positis, sutura nigricanti. Corpus infra testaceum, pedibus luteis.

Sp. 11. *Volvulus*, N. S.

Evidently a new species; but it is in too mutilated a state to describe.